

ARTIFACT SHEET

Enter artifact number below. Artifact number is application number + artifact type code (see list below) + sequential letter (A, B, C ...). The first artifact folder for an artifact type receives the letter A, the second B, etc.. Examples: 59123456PA, 59123456PB, 59123456ZA, 59123456ZB

Indicate quantity of a single type of artifact received but not scanned. Create individual artifact folder/box and artifact number for each Artifact Type.

☐

CD(s) containing computer program listing

Doc Code: Computer

Artifact Type Code: P

☐

Stapled Set(s) of Extra Color Drawings/Photographs

Doc Code: Artifact

Artifact Type Code: C

☐

CD(s) containing pages of specification

☐

and/or sequence listing ☐

Doc Code: Artifact

Artifact Type Code: S

☐

CD(s) with content unspecified

Doc Code: Artifact

Artifact Type Code: U

☐

Microfilm(s)

Doc Code: Artifact

Artifact Type Code: F

☐

Video tape(s)

Doc Code: Artifact

Artifact Type Code: V

☐

Model(s)

Doc Code: Artifact

Artifact Type Code: M

☐

Bound Document(s)

Doc Code: Artifact

Artifact Type Code: B

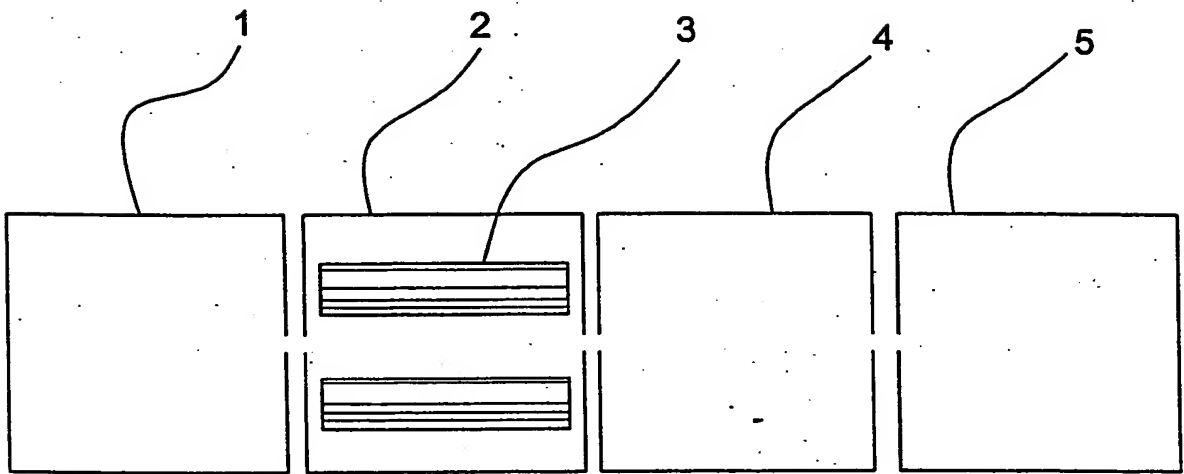
☐

Other, description: _____

Doc Code: Artifact

Artifact Type Code: Z

FIG. 1



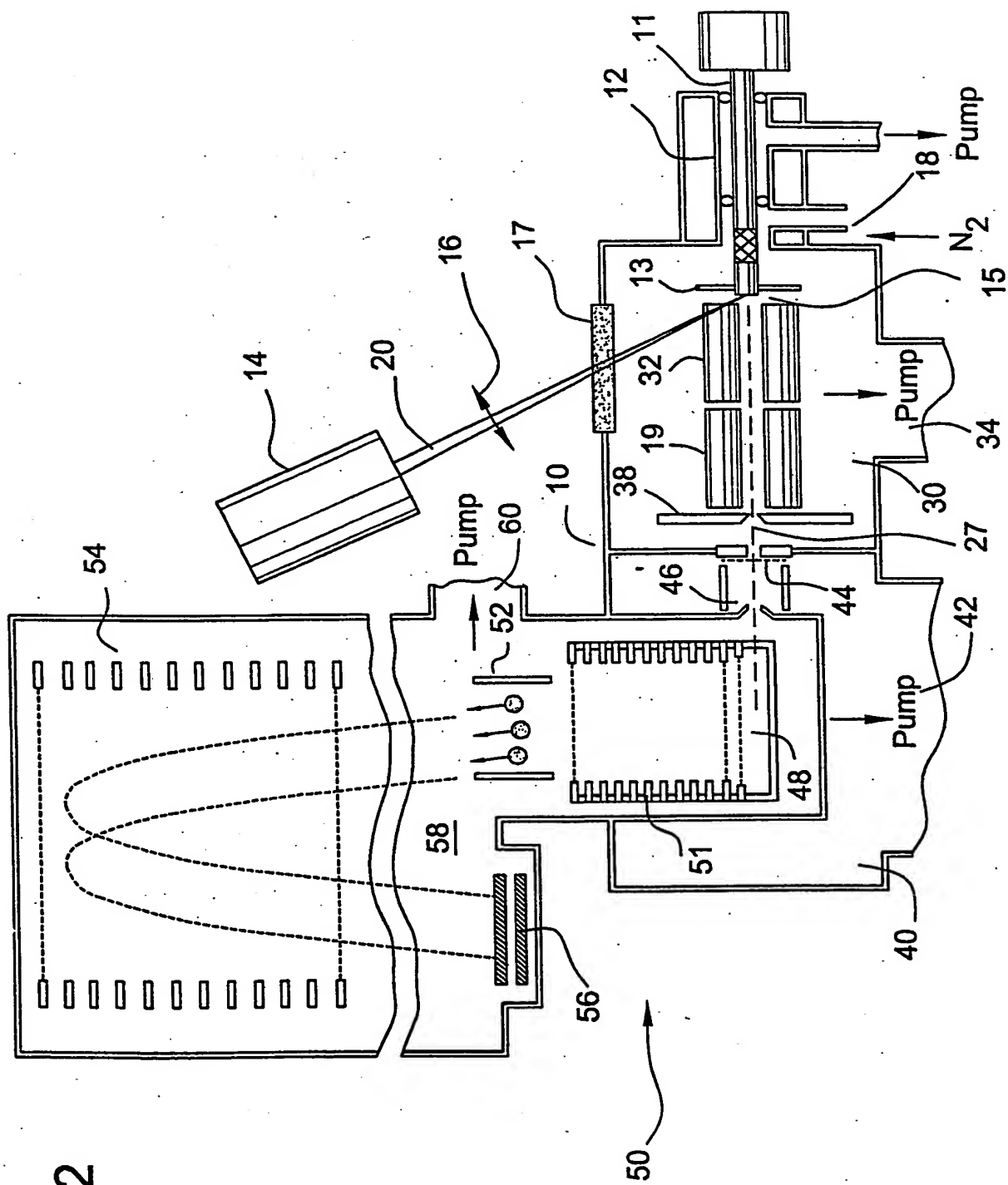


FIG. 3

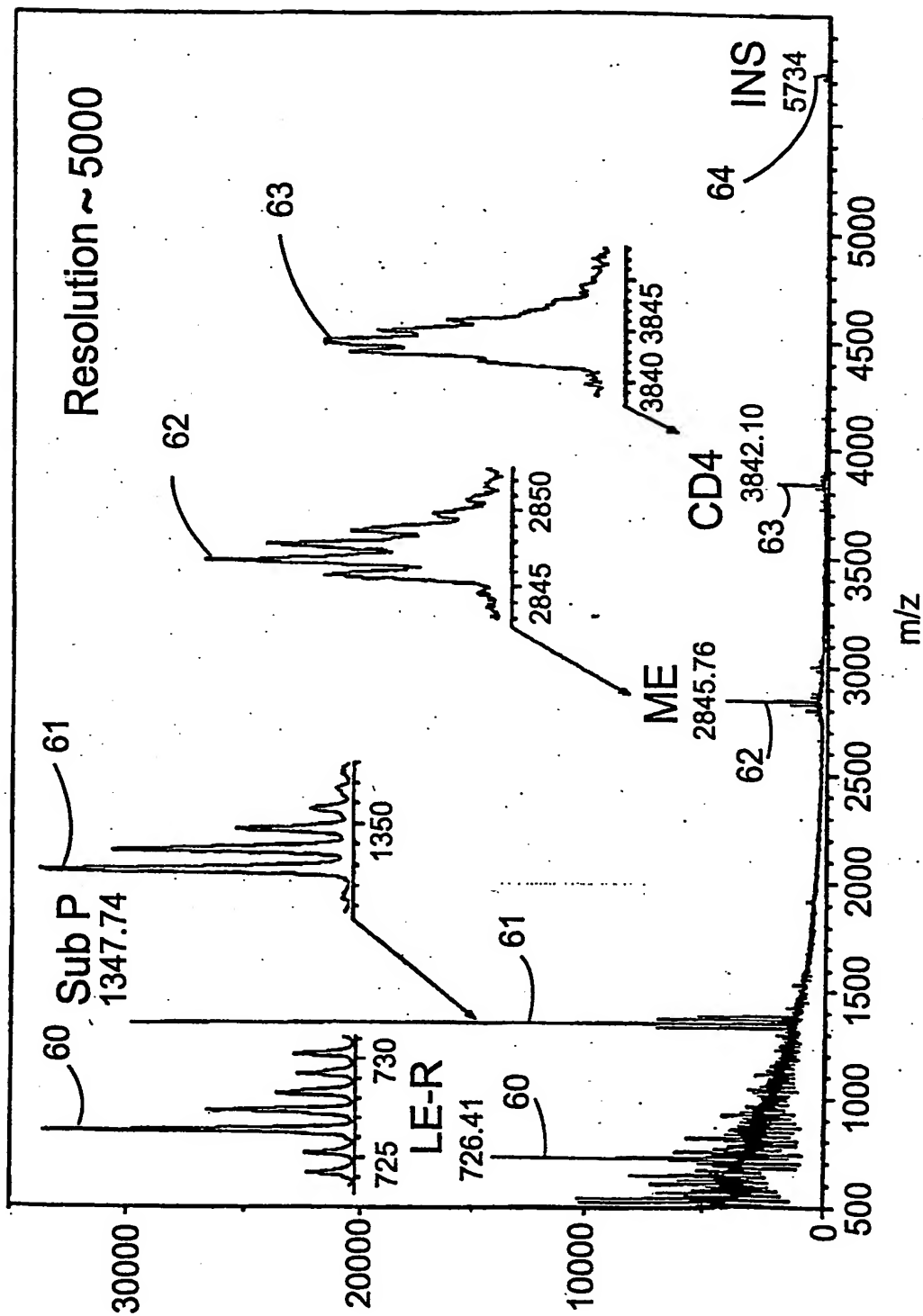


FIG. 4

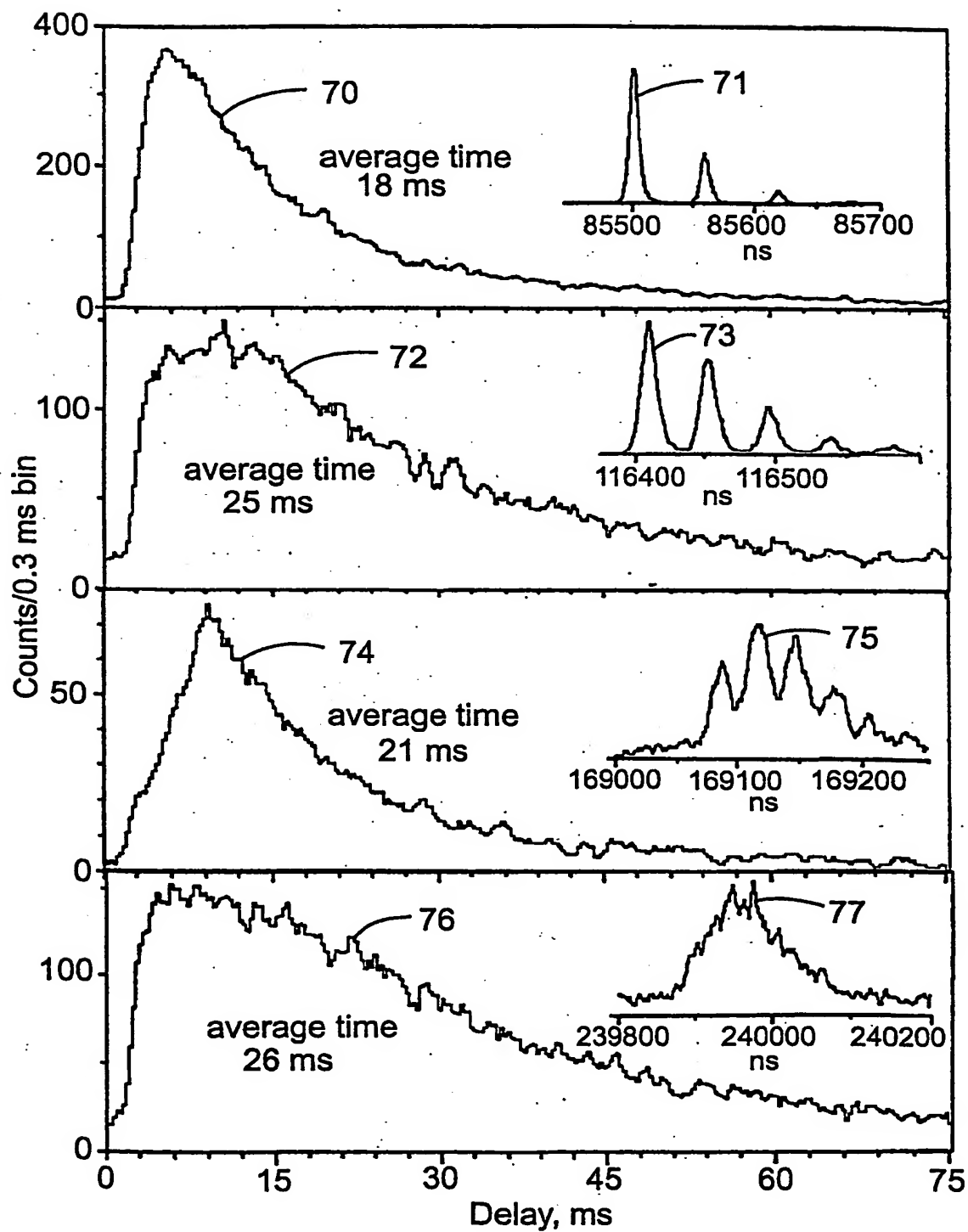


FIG. 5

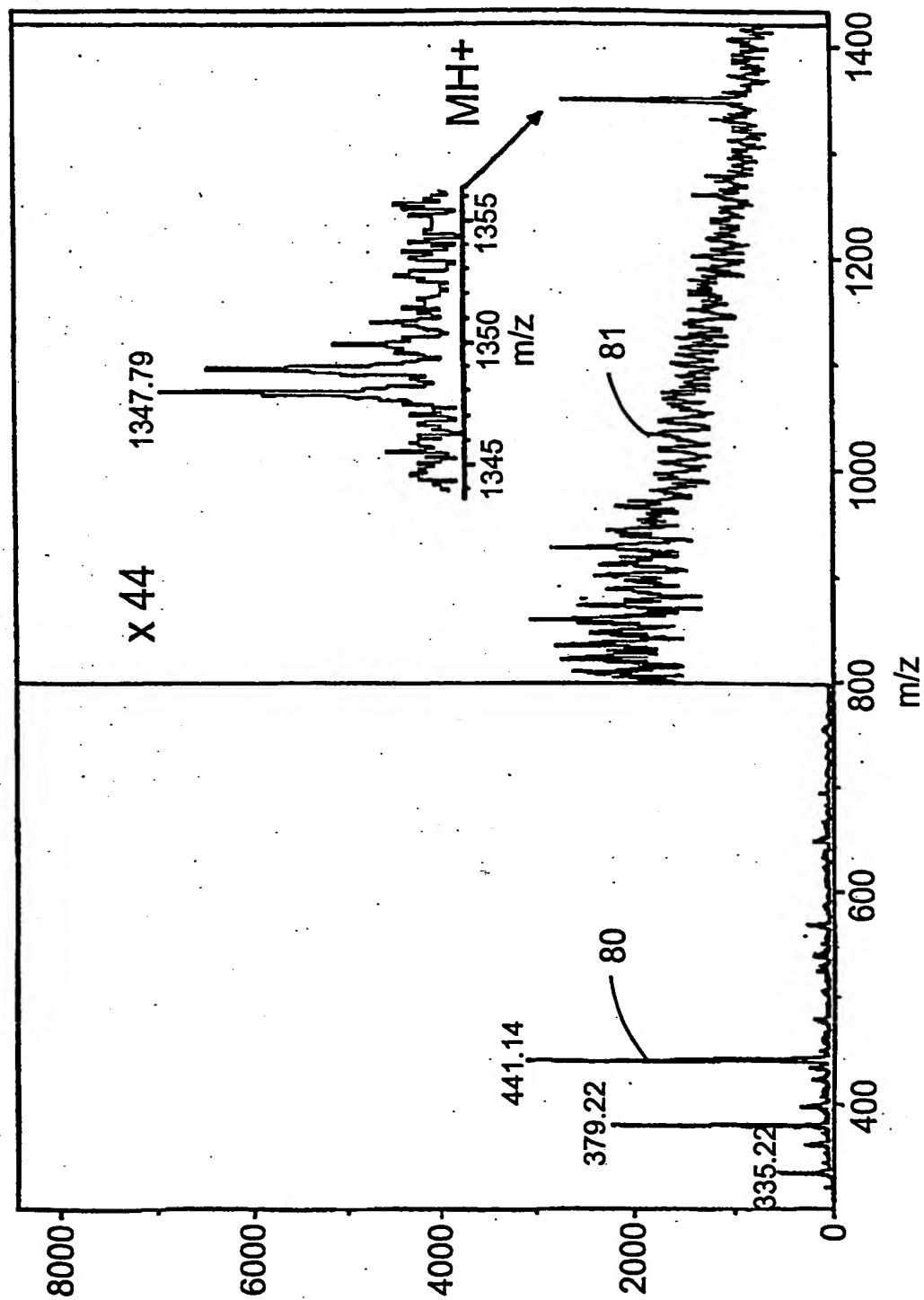


FIG. 6

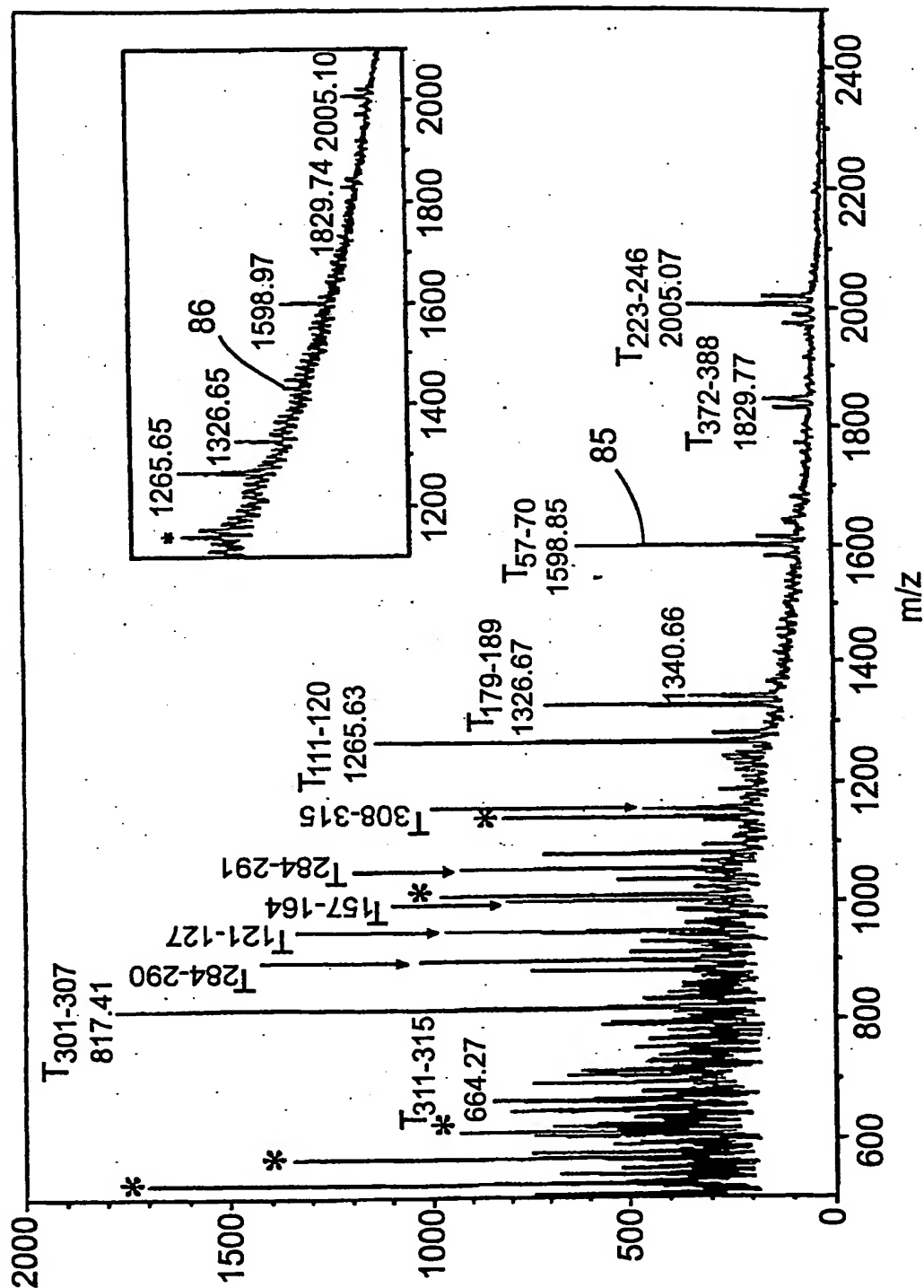


FIG. 7A

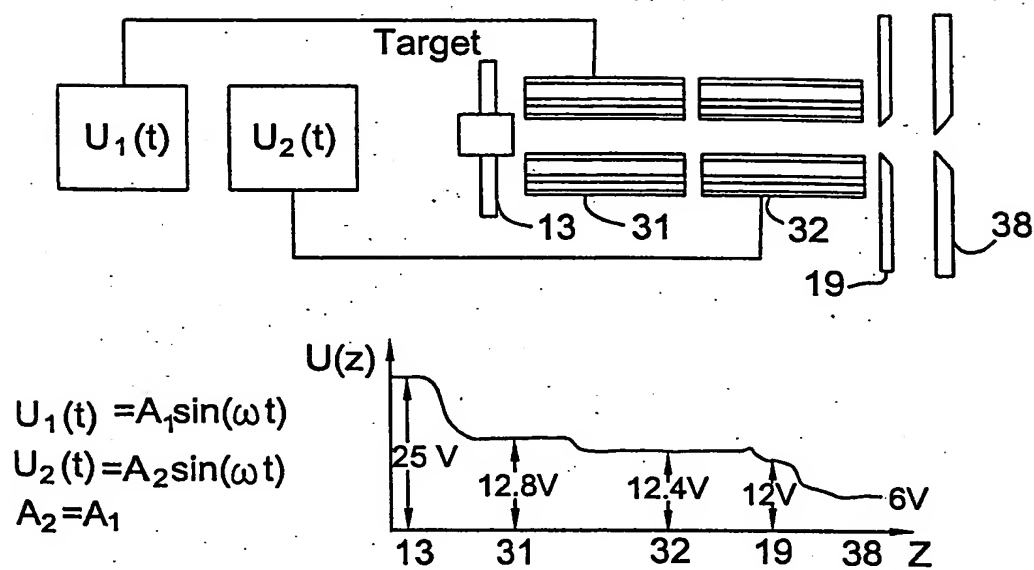


FIG. 7B

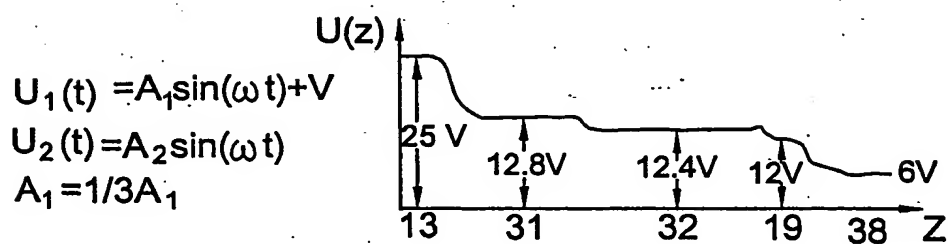
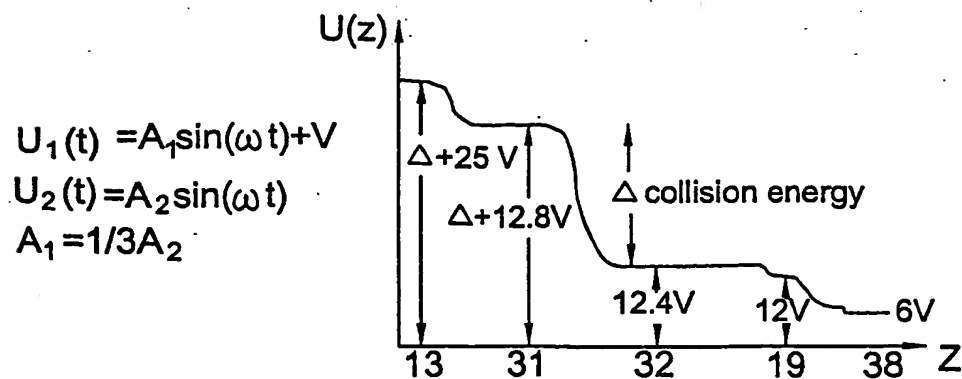


FIG. 7C



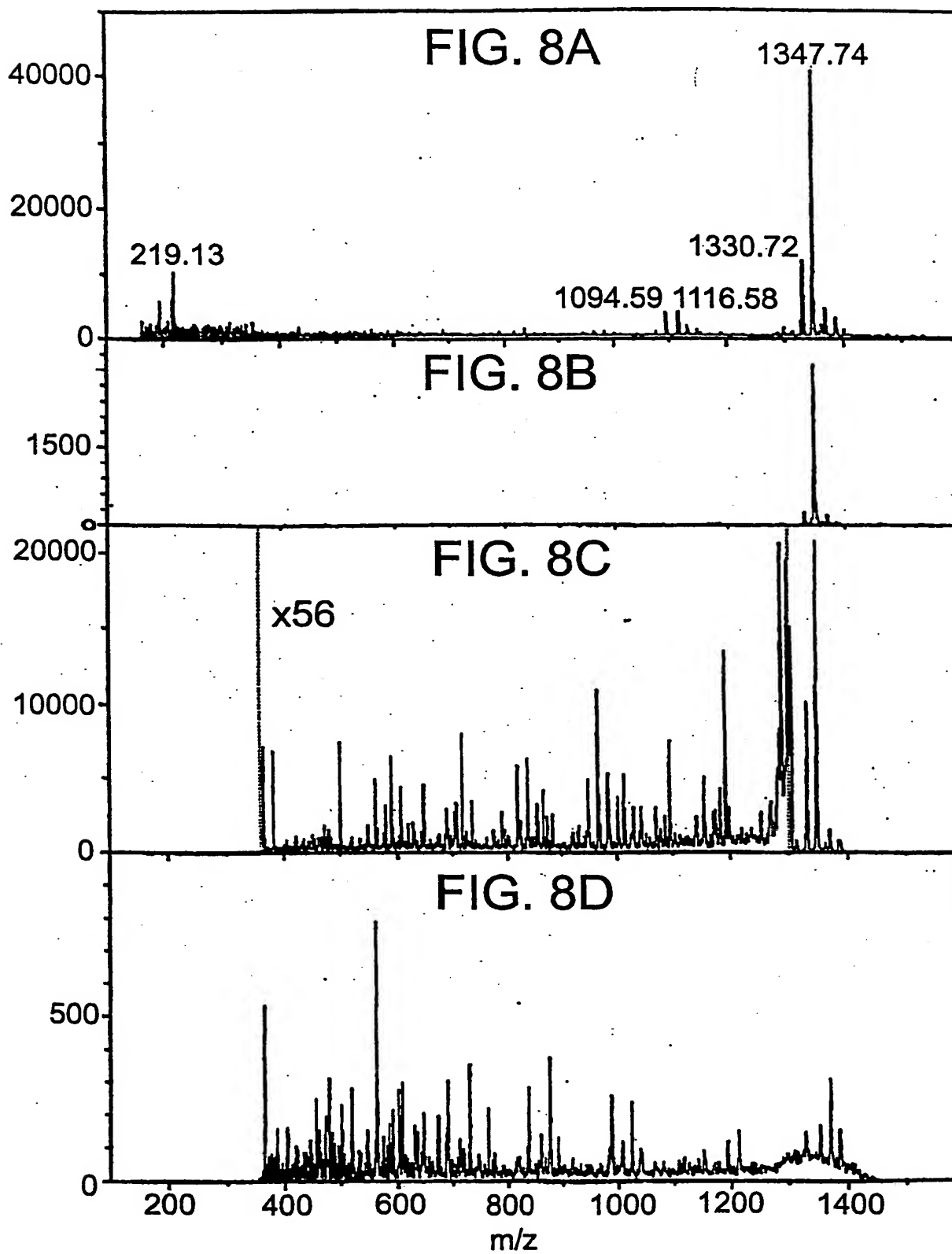
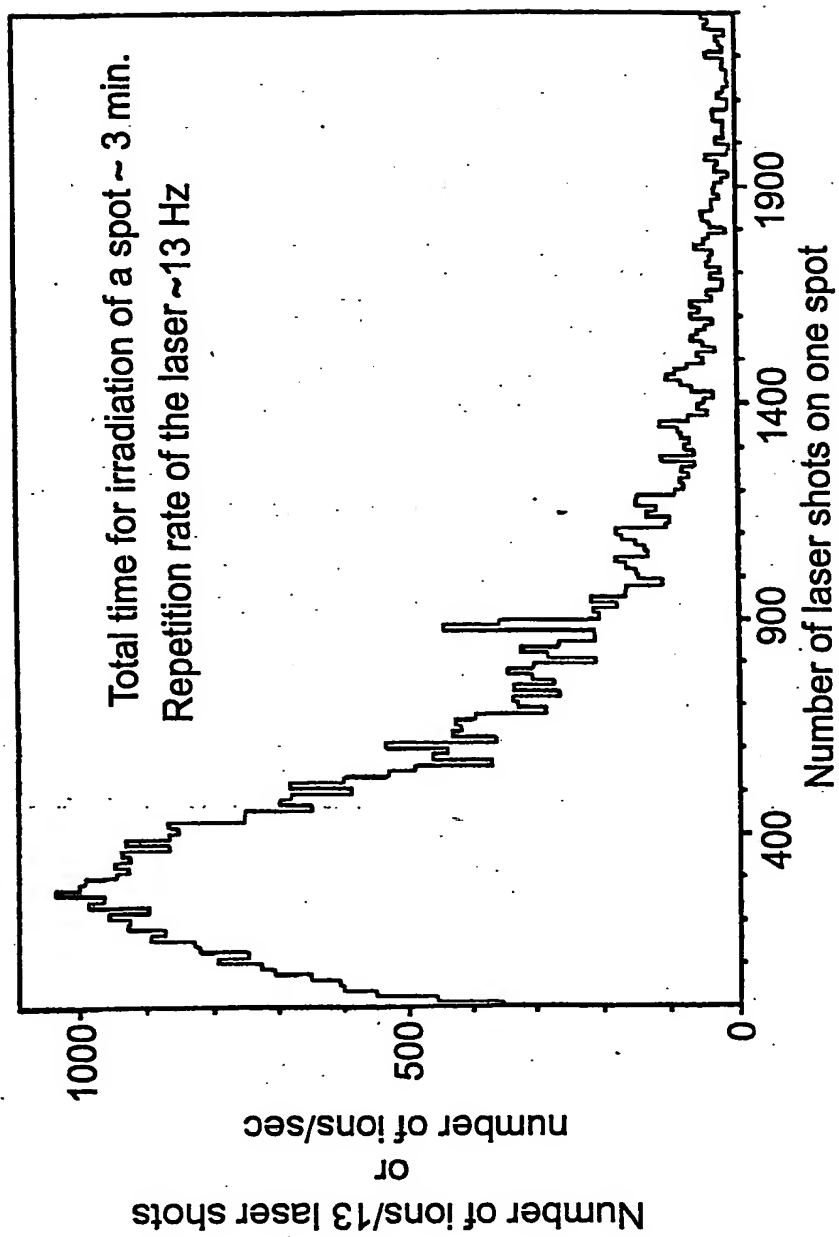


FIG. 9



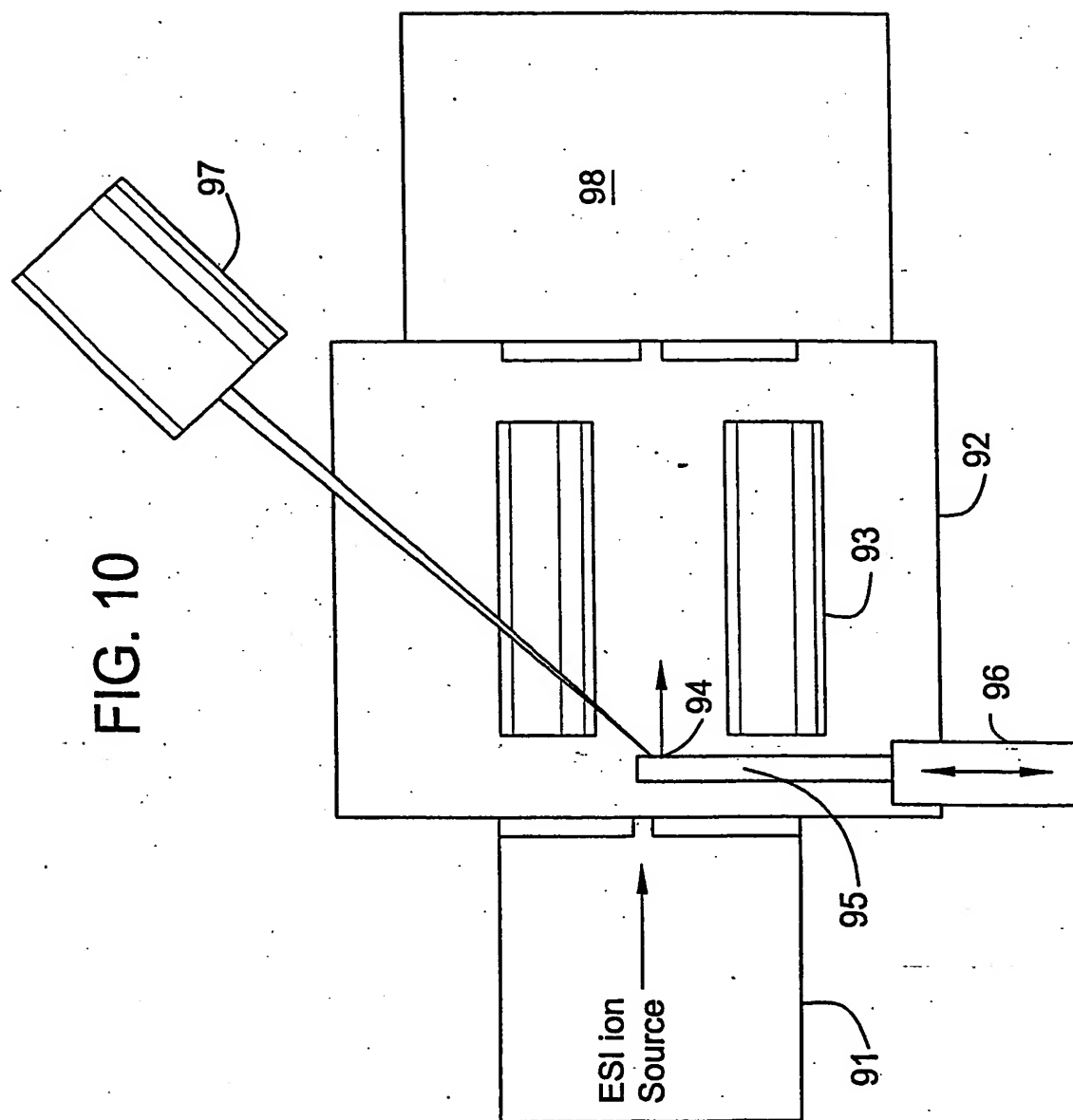
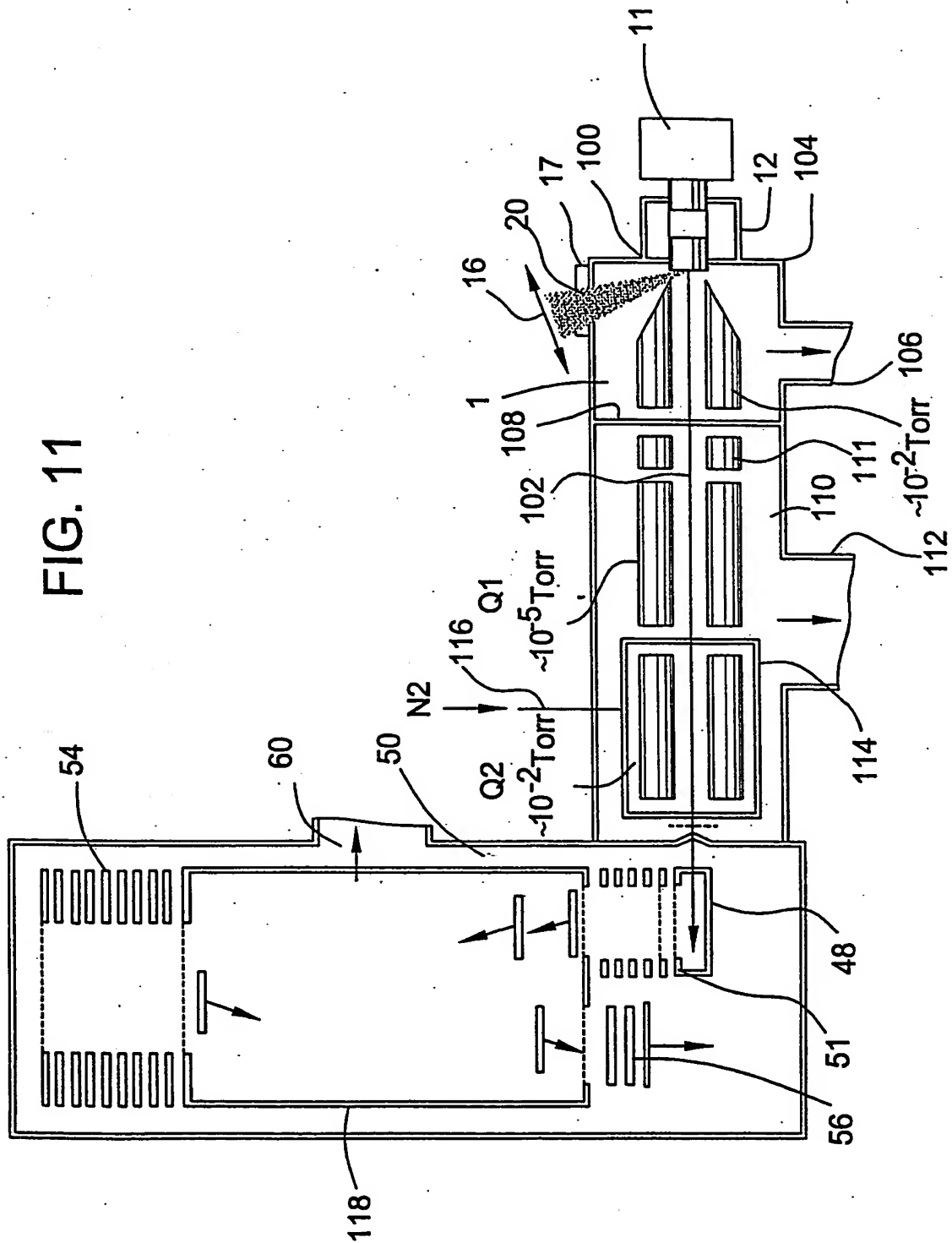


FIG. 11

This schematic diagram illustrates a complex ultra-high vacuum (UHV) system, likely for scanning tunneling microscopy (STM) or similar high-resolution surface analysis. The system is composed of several interconnected chambers and components:

- Main Chamber (118):** The largest central chamber, which houses the sample (1) and the scanning probe (100). It is equipped with a large ion pump (54) for maintaining high vacuum and a sample manipulator (51) for precise positioning.
- Sample Manipulator (51):** A mechanism for moving the sample (1) within the main chamber, featuring a vertical shaft and a horizontal stage.
- Sample (1):** The specimen being analyzed, positioned on a substrate.
- Scanning Probe (100):** The tip used for scanning the sample surface, mounted on a vertical support structure.
- Gas Inlets and Pumps:** The system includes multiple gas inlets (e.g., N₂ at 116, Q1 at 108, Q2 at 102) and pumps (e.g., 110, 111, 112, 114) to maintain different pressure levels in different regions, such as $\sim 10^{-5}$ Torr and $\sim 10^{-2}$ Torr.
- Viewing Chamber (56):** A separate chamber for observing the sample, containing a camera (56) and a viewing window (58).
- Other Components:** Various other parts are labeled, including a base (60), a support structure (104), and a viewing window (106).



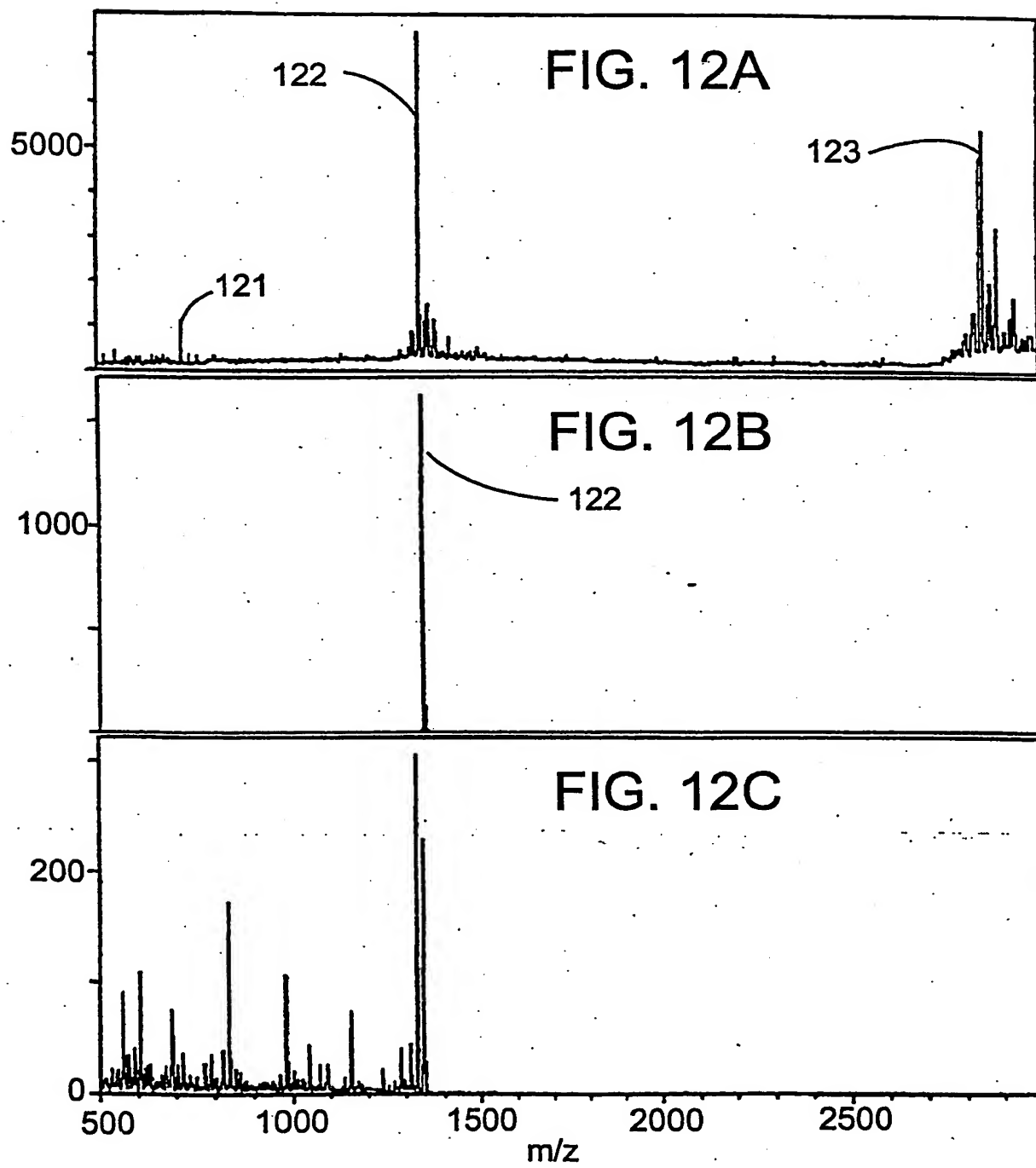


FIG. 13

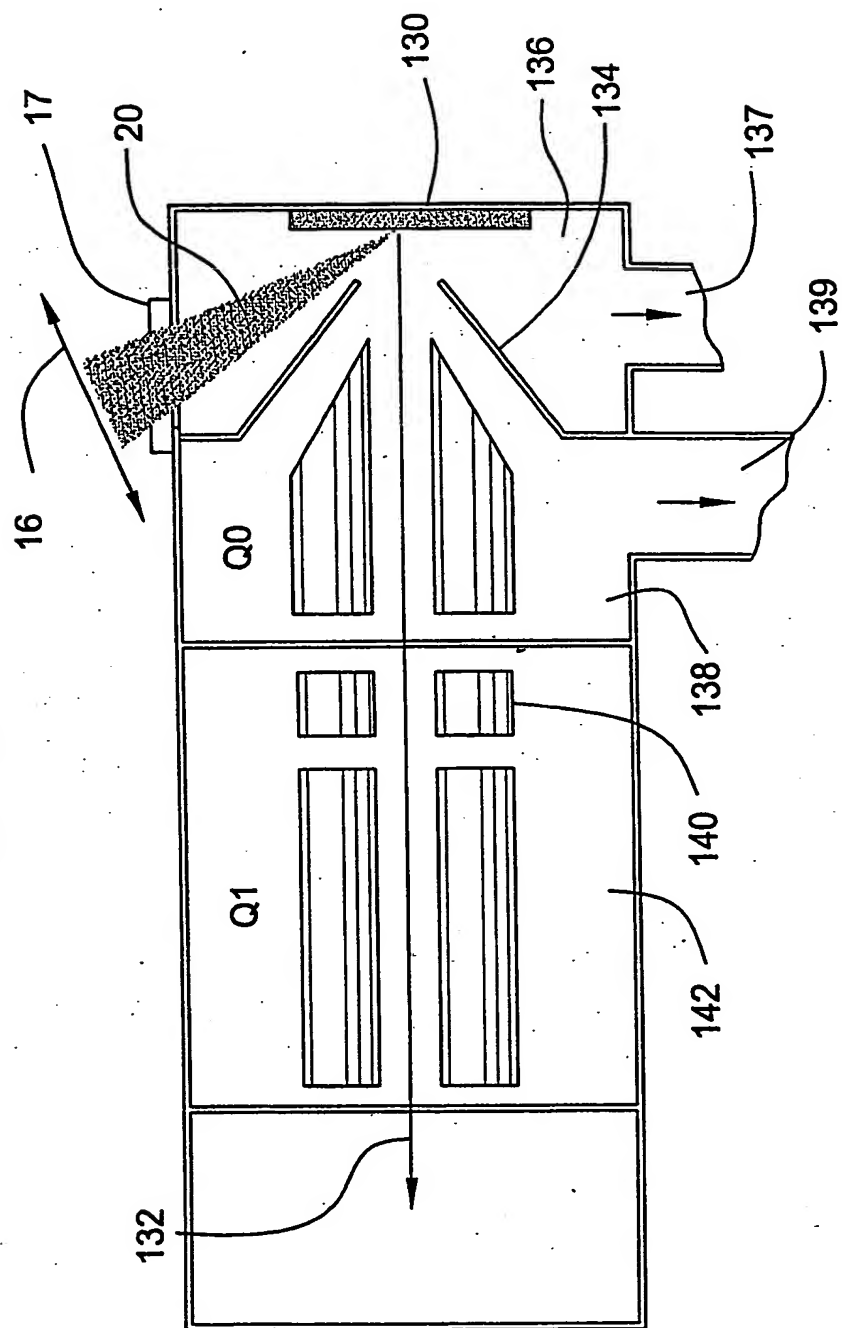


FIG. 14

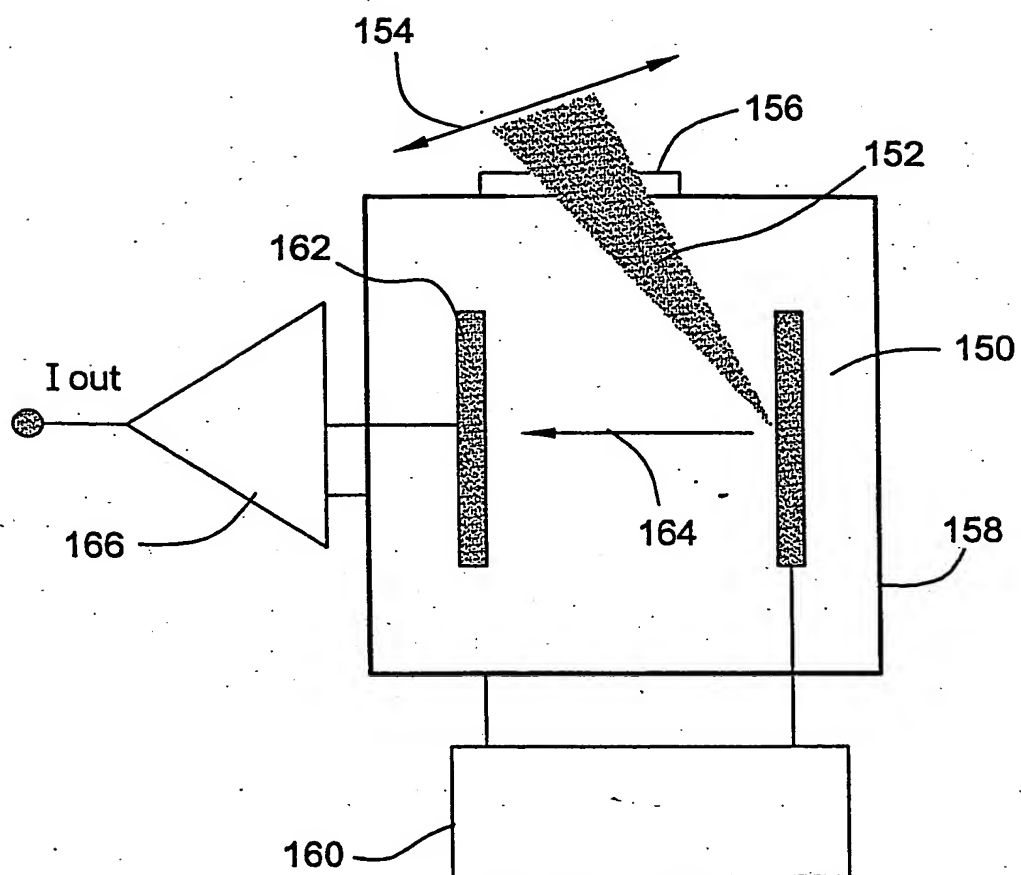


FIG. 15

